Listing of Claims:

1. (Currently Amended) A display device for displaying image information ~~according~~ corresponding to [[a]] display ~~signal consisting of~~ signals derived from digital signals, the display device comprising:

a display panel ~~(110A)~~ comprising a plurality of signal lines ~~(DL)~~ and a plurality of scanning lines ~~(SL)~~ which intersect ~~at right angles~~ perpendicularly with each other [[,]] and a plurality of display pixels ~~(EM)~~ with optical elements arranged near ~~the~~ intersecting ~~point~~ points of the plurality of signal lines and the plurality of scanning lines;

a scanning driver circuit ~~(120A, 120B)~~ for sequentially applying a scanning signal to each of the plurality of scanning lines for setting the plurality of display pixels in a selective state ~~of each~~ a line ~~of each display pixel~~ at a time; and

a signal driver circuit ~~(130A-G)~~ comprising a plurality of current generation circuits, ~~(ILA, ILB, ISA, ISB, ISC-F, PXA-D);~~ wherein each of the current generation circuits ~~comprise~~ comprises: ~~at least~~

a gradation current generation circuit ~~(21A-D) and a drive current generation circuit; the gradation current generation circuit~~ which generates a plurality of gradation currents corresponding to each bit of the display ~~signal bits~~

signals based on ~~constant,~~ a predetermined constant reference current; ~~, and the~~

a drive current generation circuit ~~(22A-D)~~ which generates a drive current that is selected based on ~~from~~ the plurality of gradation currents ~~based on the value of the display signal which supplies the generated drive current~~ corresponding to each bit of the display signals, and that is supplied to ~~each~~ a corresponding signal line; and

a specified state setting circuit which supplies a specified voltage to the corresponding signal line to drive the corresponding optical element in a specified operating state instead of supplying the drive current, when the display signals have a specified value that sets all of the plurality of gradation currents in a non-selection state.

2. (Currently Amended) The display device according to claim 1, wherein each current generation circuit sets ~~the~~ a signal polarity of the drive current so that the drive current flows in ~~the~~ a direction drawn from ~~the~~ a display pixels side.

3. (Currently Amended) The display device according to claim 1, wherein each current generation circuit sets ~~the~~ a signal polarity of the drive current so the drive current flows in ~~the~~ a direction poured into the display pixels.

4. (Original) The display device according to claim 1, wherein each of a plurality of current generation circuits in the signal driver circuit is provided corresponding to each of a plurality of the display pixels of each scanning line of the display panel.

5. (Currently Amended) The display device according to claim 4, wherein ~~each~~ the current generation ~~circuit supplies~~ circuits supply the corresponding drive ~~current~~ currents simultaneously ~~corresponding~~ to each of ~~a~~ the plurality of pixels of each scanning line.

6. (Currently Amended) The display device according to claim 1, wherein each current generation circuit further comprises a signal holding circuit ~~(10, 101, 102, 103)~~ which takes in and holds ~~the~~ a display signal.

7. (Currently Amended) The display device according to claim 6, wherein the drive current generation circuit generates the drive current based on ~~the~~ a value of the display signal held in the signal holding circuit.

8. (Withdrawn - Currently Amended) The display device according to claim 6, wherein the signal holding circuit

comprises a plurality of latch circuits ~~(LC0, LC1, LC2, LC3)~~ which take in and hold each bit of the display ~~signal bits~~ signals, and outputs an output signal responsive to each bit.

9. (Currently Amended) The display device according to claim 1, wherein the drive current generation circuit comprises a switching circuit ~~(Tr26-Tr29, Tr36-39, Tr66-69)~~ for selecting ~~the gradation~~ a current from the plurality of gradation currents in response to each bit value of the display ~~signal~~ signals.

10. (Currently Amended) The display device according to claim 9, wherein the current generation circuit further comprises a signal holding circuit for taking in and holding ~~the~~ a display signal.

11. (Currently Amended) The display device according to claim 10, wherein the signal holding circuit comprises a plurality of latch circuits which take in and hold each bit of the display ~~signal~~ signals and output an output signal responsive to each bit; and

wherein the switching circuit selects from the gradation currents and generates the drive current ~~drive~~ based on the output of the plurality of latch circuits.

12. (Currently Amended) The display device according to claim 1, wherein ~~the~~ a current value of the plurality of gradation currents have a different ratio with respect to each other specified by ~~2n (~~ 2^n where n = 0, 1, 2 and 3, . . . [[)]].

13. (Currently Amended) The display device according to claim 1, wherein each gradation current generation circuit comprises a plurality of gradation current transistors ~~(Tr22-25, Tr32-35, Tr62-65)~~ for generating ~~a~~ the plurality of gradation currents.

14. (Currently Amended) The display device according to claim 13, wherein each of the plurality of gradation current transistors ~~each transistor~~ differs in a transistor size and each control terminal thereof is connected in parallel; and

wherein the gradation currents flow in ~~the~~ a current path of each of the gradation current transistors.

15. (Currently Amended) The display device according to claim 14, wherein ~~the~~ a channel width of each gradation current transistor is set at a different ratio with respect to each other specified by ~~2n (~~ 2^n where n = 0, 1, 2 and 3 , . . . [[)]].

16. (Currently Amended) The display device according to claim 13, wherein each gradation current generation circuit comprises a reference voltage generation circuit for generating a reference voltage based on the constant reference current.

17. (Currently Amended) The display device according to claim 16, wherein the reference voltage generation circuit comprises a reference current transistor ~~transistors (Tr21, Tr31, Tr61)~~ for generating the reference voltage ~~to the~~ for control terminals;

wherein the reference current is supplied to ~~the~~ a current path; and

wherein a ~~the~~ reference current transistor control ~~terminals are~~ terminal is connected in common to the control terminals of the plurality of gradation current transistors.

18. (Currently Amended) The display device according to claim 17, wherein the reference current ~~transistors~~ transistor and the plurality of gradation current transistors constitute a current mirror circuit.

19. (Withdrawn - Currently Amended) The display device according to claim 17, wherein at least any one of the reference

current ~~transistors~~ transistor and the plurality of gradation current transistors ~~constitute~~ has a transistor structure which comprises:

a channel region ~~(Rchn)~~ in ~~the~~ a semiconductor layer ~~(Rac)~~ formed by an insulator layer in ~~the~~ an entire surface side of a semiconductor substrate ~~(sub)~~;

a source region ~~(RS)~~ and a drain region ~~(RD)~~ formed across the channel region ~~(Rchn)~~;

a terminal region ~~(RT)~~ formed and projected from the channel region in a vertical direction toward ~~the~~ an opposite axis of the source region and the drain region;

a gate electrode ~~(EG)~~ formed by a gate insulator layer on said channel region;

a drain electrode ~~(ED)~~ electrically connected to the drain region; and

a single body terminal electrode ~~(EB)~~ electrically connected to the source region and the terminal region.

20. (Currently Amended) The display device according to claim 1, wherein each gradation current generation circuit further comprises a reference voltage generation circuit for generating a reference voltage based on the constant reference current.

21. (Currently Amended) The display device according to claim 20, wherein the reference voltage generation circuit comprises an electric charge storage circuit ~~(C1)~~ for storing ~~the~~ an electric charge in response to ~~the~~ a current component of the reference current.

22. (Currently Amended) The display device according to claim 1, wherein the signal driver circuit comprises:

a reference current supply line for supplying the reference current; and [[,]]

a structure in which the reference current is supplied to the plurality of gradation current generation circuits via the reference current supply line.

23. (Currently Amended) The display device according to claim 22, wherein each gradation generation circuit comprises a supply control switching circuit ~~(TS1, TS2)~~ for controlling ~~the~~ a supply state of the reference current from the reference current supply line to the ~~proper~~ gradation current generation circuit; and

wherein the supply control switching ~~circuit~~ circuits selectively ~~performs~~ perform switching control so the reference current may be supplied only to any one gradation current

generation circuit of the plurality of gradation current generation circuits.

24. (Currently Amended) The display device according to claim 23, wherein each current generation circuit comprises a signal holding circuit for taking in and holding ~~the~~ a display signal.

25. (Currently Amended) The display device according to claim 24, wherein ~~the~~ a supply control switching circuit timing of the switching control synchronizes with ~~the~~ a timing of the signal holding circuit ~~at the time~~ of taking in and holding the display signal.

Claim 26 (Canceled).

27. (Currently Amended) The display device according to claim ~~26~~ 1, wherein ~~the drive current is generated for selecting the gradation currents according to each of the display signal bits; the display signal specified value is a value from which all of each of the gradation currents is non-selected from the display signals;~~ the specified voltage is ~~the~~ a voltage ~~for setting~~ which drives the corresponding optical element ~~elements drive~~ in a minimum gradation state ~~of lowest gradation~~.

28. (Currently Amended) The display device according to claim ~~26~~ 1, wherein the specified state setting circuit comprises:

a specified digital value judgment section ~~(31, 33)~~ for judging whether or not the display ~~signal is~~ signals have the specified value, and

a specified voltage application section ~~(TN32, TP34)~~ for applying the specified voltage to the corresponding signal ~~lines~~ line based on a result of the judgment ~~result~~ by the specified digital value judgment section.

29. (Currently Amended) The display device according to claim 28, wherein the specified digital value judgment section performs the judgment of whether or not said display ~~signal is~~ signals have the specified value based on ~~the~~ a logical sum of each bit value of the digital signals of the display signals.

30. (Withdrawn - Currently Amended) The display device according to claim 1, wherein each current generation circuit further comprises a reset circuit ~~(30A, 30B)~~ for applying a predetermined reset voltage ~~(Vr)~~ to the corresponding signal ~~lines~~ line in advance of ~~the~~ a timing ~~which supplies~~ when the drive current is supplied to the signal ~~lines~~ line.

31. (Withdrawn - Currently Amended) The display device according to claim 30, wherein the reset voltage is at least ~~the~~ a low potential voltage for discharging ~~the~~ an electric charge stored up in ~~the~~ a capacitative element attached to the corresponding optical ~~elements~~ element in the corresponding display ~~pixels~~ pixel, and for initializing the optical ~~elements~~ element.

32. (Withdrawn - Currently Amended) The display device according to claim 30, wherein the drive current is generated ~~for~~ by selecting the gradation currents according to each bit of the display ~~signal bits~~ signals; and

wherein the reset voltage is applied when ~~the~~ a display signal specified value presupposes non-selection of all of the plurality of gradation currents.

33. (Withdrawn - Currently Amended) The display device according to claim 32, wherein the reset circuit comprises:

a specified digital value judgment section ~~(31, 33)~~ for judging whether or not the display ~~signal is~~ signals have the specified value; and

a reset voltage application section ~~(TN32, TP34)~~ for applying the reset voltage to the corresponding signal ~~lines~~ line

based on a result of the judgment ~~result~~ by the specified digital value judgment section.

34. (Withdrawn - Currently Amended) The display device according to claim 33, wherein the specified digital value judgment section performs the judgment of whether or not the display ~~signal is~~ signals have the specified value based on ~~the~~ a logical sum of each bit value of the digital signals of the display signals.

35. (Currently Amended) The display device according to claim 1, wherein the optical elements in the display pixels comprise light emitting elements for accomplishing a light generation operation by way of luminosity gradation according to ~~the~~ a current value of the ~~supply current~~ supplied drive currents.

36. (Currently Amended) The display device according to claim 35, wherein the light emitting elements comprise organic electroluminescent elements ~~(OEL)~~.

37. (Currently Amended) The display device according to claim 35, wherein the display pixels comprise at least a pixel driver circuit ~~(DCx, Dcy)~~; and

wherein the pixel driver circuit includes:

a voltage holding circuit ~~(Cx, Cy)~~ for holding ~~the~~ a voltage component in response to the drive current supplied from the signal driver circuit; and

a current supply circuit ~~(Tr73, Tr81, Tr83, Tr91, Tr93, Tr103)~~ for supplying luminescent drive current to the corresponding light emitting ~~elements~~ element based on the voltage component held in the voltage holding circuit and for making the light emitting ~~elements~~ element emit light.

38. (Withdrawn - Currently Amended) The display device according to claim 37, wherein the pixel driver circuit comprises an electric discharge circuit ~~(Tr85)~~ for discharging ~~the~~ an electric charge responsive to the voltage component stored up in the voltage holding circuit.

39. (Withdrawn - Currently Amended) The display device according to claim 37, wherein the current supply circuit comprises ~~transistors~~ a transistor for use of luminescent drive for supplying luminescent current to the corresponding light emitting ~~elements~~ element, the ~~transistors~~ transistor for use of luminescent drive has a transistor structure which comprises:

a channel region in ~~the~~ a semiconductor layer formed by an insulator layer in ~~the~~ an entire surface side of a semiconductor substrate;

~~a channel region;~~

a source region and a drain region formed across the channel region;

a terminal region formed and projected from the channel region in a vertical direction toward ~~the~~ an opposite axis of the source region and the drain region;

a gate electrode formed by a gate insulator layer on the channel region;

a drain electrode electrically connected to the drain region; and

a single body terminal electrode electrically connected to the source region and the terminal region.

Claims 40-63 (Canceled).

64. (Currently Amended) A method for driving ~~the~~ a display device which displays image information ~~according~~ corresponding to display signals ~~consisting of~~ derived from digital signals ~~in~~ on a display panel comprising a plurality of display pixels provided with optical elements arranged ~~close~~

~~to the~~ near intersecting ~~point~~ points of a plurality of signal lines and a plurality of scanning lines, the method comprising:

taking in and holding the display ~~signal~~ signals corresponding to the plurality of display pixels;

generating ~~drive current according to a value of the held display signal from~~ a plurality of gradation currents ~~generated~~ corresponding to each bit of the display ~~signal bits~~ signals based on ~~constant,~~ a predetermined constant reference current; ~~and~~

generating a drive current selected based on the plurality of gradation currents corresponding to each bit of the display signals held;

supplying the generated drive current to the ~~plurality of~~ corresponding signal ~~lines~~ line;

judging whether or not the display signals have a specified value that sets all of the plurality of gradation currents in a non-selection state; and

when it is judged that the display signals have the specified value, supplying a specified voltage to the corresponding signal line to drive the corresponding display pixel in a specified operating state instead of supplying the generated drive current.

65. (Currently Amended) The method for driving the display device according to claim 64, wherein a current value of the plurality of gradation currents have a different ratio with respect to each other specified by ~~2n (~~ 2^n where n = 0, 1, 2, and 3, . . . [[)]].

66. (Currently Amended) The method for driving the display device according to claim 64, wherein the ~~generating~~ drive current ~~step includes~~ is generated by selecting and integrating ~~corresponding to~~ the corresponding gradation currents in response to each bit value of the display ~~signal~~ signals.

67. (Currently Amended) The method for driving the display device according to claim 64, wherein ~~the~~ a signal polarity of the drive current is set so the drive current flows in ~~the~~ a direction drawn from ~~the~~ a display ~~pixels~~ pixel side.

68. (Currently Amended) The method for driving the display device according to claim 64, wherein ~~the~~ a signal polarity of the drive current is set so the drive current flows in ~~the~~ a direction poured into the display pixels.

69. (Currently Amended) The method for driving the display device according to claim 64, wherein the optical elements in the

display pixels comprise light emitting elements which accomplish light generation operation by way of luminosity gradation according to ~~the~~ a current value of the ~~supply current~~ supplied drive currents.

70. (Currently Amended) The method for driving the display device according to claim 69, wherein the light emitting elements comprise organic electroluminescent elements ~~(OEL)~~.

71. (Currently Amended) The method for driving the display device according to claim 69, further comprising:

holding ~~the~~ a voltage component corresponding to the drive current; and

supplying a luminescent drive current to the corresponding light emitting ~~elements~~ element based on the held voltage component ~~held in the voltage holding circuit~~, ~~which makes~~ thereby making the light emitting ~~elements~~ element emit light.

Claim 72 (Canceled).

73. (Currently Amended) The method for driving the display device according to claim ~~72~~ 64, wherein ~~the drive current is generated by selecting the gradation currents according to each of the display signal bits; the specified value is a value from~~

~~which all of each of the gradation currents is non-selected from the display signal,~~ the specified voltage is ~~the~~ a voltage ~~for setting~~ which drives the corresponding optical element ~~elements drive~~ in a minimum gradation state ~~of lowest gradation~~.

74. (Withdrawn - Currently Amended) The method for driving the display device according to claim 64, further ~~comprises~~ comprising applying a predetermined reset voltage to the signal lines at the timing before applying the drive current to each signal line.

75. (Withdrawn - Currently Amended) The method for driving the display device according to claim 74, wherein the reset voltage is at least ~~the~~ a low potential voltage for initializing each load and discharging ~~the~~ a charge stored up in ~~the~~ a capacitative element attached to each load.

76. (Withdrawn - Currently Amended) The method for driving the display device according to claim 75, wherein the drive current is generated by selecting the gradation currents according to each bit of the display ~~signal bits~~ signals,

and wherein the reset voltage is applied when the display ~~signal becomes~~ signals have the specified value which presupposes non-selection of all of the gradation currents.

77. (Withdrawn - Currently Amended) The method for driving the display device according to claim 76, ~~wherein the reset voltage applying step~~ further ~~comprises:~~ comprising:

judging whether the display ~~signal is~~ signals have the specified value or not, and

applying the reset voltage to the corresponding signal ~~lines~~ line when it is judged that the display ~~signal as being~~ signals have the specified value.

78. (Withdrawn - Currently Amended) The method for driving the display device according to claim 64, further ~~comprises~~ comprising discharging ~~the~~ a charge stored up in ~~the~~ a capacitative element attached to the optical elements in the display pixels at ~~the~~ a timing before applying the drive current to each signal line.